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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/423,817	11/15/1999	HARUHIKO NAGAI	2565-187P	7184

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EXAMINER

PARKER, KENNETH

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 03/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/423,817

Applicant(s)

NAGAI ET AL.

Examiner

Kenneth A Parker

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 13-73 is/are pending in the application.
- 4a) Of the above claim(s) 1-8, 13-32, 36-58 and 64 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 33 is/are allowed.
- 6) ☒ Claim(s) 34, 35, 59 and 65-73 is/are rejected.
- 7) ☒ Claim(s) 60-63 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 34-35, 66-69 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

What "in time sharing" means is unclear, as the terms have no known meaning as used. It appears as though applicant is talking about use of the beams in field sequential manner, and the claims have been examined accordingly.

What "parallel conversion" means is unclear. It appears as though it means collimation, and has been examined accordingly.

The language "similar to the light utilizing shape" is indefinite, as what would constitute similarity and what would be considered the light utilizing shape cannot be determined. Any substantially square array is presumed to meet this limitation.

### ***Claim Rejections - 35 USC § 102***

**Claims 34-35 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Ferguson US Patent # 5541745.**

Ferguson discloses a field sequential device with an array of LEDs anticipating the claims (column 13, lines 35 –column 14, line 30).

**Claims 59 and 66-69 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Herbert US Patent # 5926318.**

Herbert discloses an HMD employing an array of plural LEDs, collimation and projection optics, and micromirror devices.

**Claims and 65-69, 70-73 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Handschy et al US Patent #5,808,800.**

Handschy et al discloses a projector with collimation and projection optics (see cover figure) including a 2 dimensional array of LEDs (see figures 6, 7, 7a). Therefore, these claims are anticipated by Handchy et al

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claim 33-34, 65-69, 70-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Handschy et al US Patent #5,808,800 in view of Ferguson US Patent # 5541745.**

Lacking from Handschy is only the field sequential operation, taught by Ferguson as enabling higher resolution (cols. 13- col. 14), and obvious to use in the device of Handschy for that reason.

***Allowable Subject Matter***

Claim 33 is allowed.

Claims 60-63 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form to overcome any rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Election/Restrictions***

Applicant's arguments regarding superradiant devices are not agreed with, and not consistent with applicant's specification. Applicant's use of the term LED for what are conventional LEDs, and SD for superradiant devices clearly shows that applicant is using the terms in their conventional sense. If applicant used the term "diode", it would have been generic to LEDs, SDs and laser diodes.

Claims to superradiation, (claims 21-23, 26-29 and 32) therefore have not been examined, and therefore the elected claims are 33-35, and 66-69.

Claim 64 to LCDs also have not been examined, as they were none elected.

***Response to Arguments***


Applicant's arguments regarding the issues under 112 are not persuasive.

The rejections under 112 remain as the language rejected has no known meaning. Even if it is possible to determine what feature of the specification is referred to or an example of what applicant means, there is still no way to determine the meets and bounds of the language.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth A Parker whose telephone number is 703-305-6202. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William L. Sikes can be reached on 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.

  
Kenneth A Parker  
Primary Examiner  
Art Unit 2871

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March 24, 2003